AMENDMENTS TO THE CLAIMS

1. (Currently amended) A thermal combustion engine ~~(1, 1', 1", 51, 51', 51")~~ for converting thermal energy into mechanical energy, comprising:

at least one vapor generation device ~~(11a, 11a', 11a", 13, 13', 61a, 61a', 63, 63')~~ for at least partially vaporizing liquid a first ~~liquid~~ working medium ~~(21, 21', 73, 73')~~ using thermal energy supplied to the thermal combustion engine ~~(1, 1', 1", 51, 51', 51"),~~;

at least one rotor ~~(11, 11', 11", 61, 61', 61")~~, which is drivable using [[the]] a vaporized first working medium ~~(21, 21', 73, 73')~~ to generate mechanical energy and is rotatable in relation to at least one stator ~~(3, 3', 3", 53, 53', 53")~~ around at least one axis of rotation[[,]]; and

at least one condensation device ~~(11c, 11c', 11c", 15, 15', 61c, 61c', 65, 65', 65")~~ for condensing the vaporized first working medium ~~(21, 21', 73, 73')~~ after driving the rotor ~~(11, 11', 11", 61, 61', 61")~~, the rotor ~~(11, 11', 11", 61, 61', 61") essentially completely~~ generally surrounding the stator ~~(3, 3', 3", 53, 53', 53")~~ and the rotor ~~(11, 11', 11", 61, 61', 61") essentially~~ generally completely enclosing the vapor generation device ~~(11a, 11a', 11a", 13, 13', 61a, 61a', 63, 63')~~ and the condensation device ~~(11c, 11c', 11c", 15, 15', 61c, 61c', 65, 65', 65")~~,

~~characterized in that~~ wherein a centrifugal force may be generated on the liquid first working medium by a rotational movement of the rotor, through which a centrifugal force closure may be implemented between the condensation device and the vapor generation device and the liquid first working medium is conveyable out of the condensation device into the vapor generation device using the centrifugal force closure.

2. (Currently amended) A thermal combustion engine ~~(1, 1', 1", 51, 51', 51", 101, 101', 101")~~ for converting thermal energy into mechanical energy, comprising:

at least one vapor generation device ~~(11a, 11a', 11a", 13, 13', 61a, 61a', 63, 63', 115, 115', 115")~~ for at least partially vaporizing a first liquid working medium ~~(21, 21', 73, 73', 137)~~ using

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thermal energy supplied to the thermal combustion engine ~~(1, 1', 1", 51, 51', 51", 101, 101', 101");~~;

at least one rotor ~~(11, 11', 11", 61, 61', 61", 117, 117', 117")~~, which is drivable using [[the]] a vaporized first working medium ~~(21, 21', 73, 73', 137)~~ to generate mechanical energy and is rotatable in relation to at least one stator ~~(3, 3', 3", 53, 53', 53", 103, 103', 103")~~ around at least one axis of rotation[[,]]; and

at least one condensation device ~~(11c, 11c', 11c", 15, 15', 61c, 61c', 65, 65', 65", 107, 107', 107")~~ for condensing the vaporized first working medium ~~(21, 21', 73, 73', 137)~~ after driving the rotor ~~(11, 11', 11", 61, 61', 61")~~, the rotor ~~(11, 11', 11", 61, 61', 61", 117, 117', 117")~~ at least partially surrounding the stator ~~(3, 3', 3", 53, 53', 53", 103, 103', 103")~~,

~~characterized in that~~ wherein a centrifugal force may be generated on the liquid first working medium by a rotational movement of the rotor, through which a centrifugal force closure may be implemented between the condensation device and the vapor generation device and the liquid first working medium is conveyable out of the condensation device into the vapor generation device using the centrifugal force closure.

3. (Currently amended) The thermal combustion engine according to Claim 2, ~~characterized in that~~ wherein the rotor ~~(11, 11', 11", 61, 61', 61", 117) essentially~~ generally completely surrounds the vapor generation device ~~(11a, 11a', 11a", 13, 13', 61a, 61a', 63, 63', 115)~~ and/or the condensation device ~~(11c, 11c', 11c", 15, 15', 61c, 61c', 65, 65', 65")~~.

4. (Currently amended) The thermal combustion engine according to Claim 2 or 3, ~~characterized in that~~ wherein the stator ~~(103, 103") essentially~~ generally completely surrounds the vapor generation device ~~(115)~~ and/or the condensation device ~~(107, 107')~~.

5. (Currently amended) The thermal combustion engine according to Claim 2, ~~characterized in that~~ wherein the vapor generation device ~~(115")~~ and/or the condensation device

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~~(107") is~~/are implemented in at least two parts and the rotor ~~(117")~~ surrounds a first part of the condensation device ~~(107a")~~ and/or a first part of the vapor generation device ~~(115a")~~ and the stator ~~(103")~~ surrounds the other part of the vapor generation device ~~(115b")~~ and/or the condensation device ~~(107b")~~.

6. (Currently amended) The thermal combustion engine according to ~~one of Claims 1 through 5~~ Claim 2, ~~characterized by~~ further comprising:

at least one first chamber ~~(13, 13', 63, 63', 129, 129', 129")~~ forming the vapor generation device[[,]];

at least one second chamber ~~(15, 15', 65, 65', 65", 131, 131', 131")~~ forming the condensation device[[,]]; and

at least one turbine chamber [[(25)]],

wherein the first chamber ~~(13, 13', 63, 63', 129, 129', 129")~~ and the second chamber ~~(15, 15', 65, 65', 65", 131, 131', 131")~~, the first chamber ~~(13, 13')~~ and the turbine chamber ~~(25, 25')~~, and/or the second chamber and the turbine chamber ~~being~~ are at least partially separated from one another using a thermally insulating wall ~~(17, 17', 17", 23, 24', 69, 69', 85, 85', 85", 121)~~ in particular.

7. (Currently amended) The thermal combustion engine according to Claim 6, ~~characterized by~~ further comprising at least one first connection device[[,]] which connects the first chamber ~~(13, 13', 63, 63')~~ and the turbine chamber ~~(25, 25')~~ for passage of the vaporized first working medium ~~(21, 21', 73, 73')~~, ~~preferably~~ comprising at least one first nozzle ~~(27, 27', 27", 77, 77', 77", 139)~~, the geometry and/or the orientation of the nozzle opening ~~preferably~~ being adjustable, and at least one first pipe ~~(75, 75', 75")~~ and/or at least one first opening~~, particularly~~ implemented in the thermally insulating wall.

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8. (Currently amended) The thermal combustion engine according to Claim 6 [[or 7]], ~~characterized by~~ further comprising at least one second connection device[[,]] which connects the turbine chamber and the second chamber for passage of the vaporized first working medium, ~~preferably~~ comprising at least one second nozzle, the geometry and/or the orientation of the nozzle opening ~~preferably~~ being adjustable, and at least one second pipe[[,]] and/or at least one second opening~~, particularly~~ implemented in the thermally insulating wall.

9. (Currently amended) The thermal combustion engine according to Claim 7 or 8, ~~characterized by~~ further comprising at least one first flow control ~~and/or regulation device,~~ which is operationally linked to the first connection device, and/or at least one second flow control ~~and/or regulation device,~~ which is operationally linked to the second connection device~~,~~ ~~preferably~~ in the form of a first and/or second valve.

10. (Currently amended) The thermal combustion engine according to ~~one of Claims~~ Claim 6 ~~through 9~~ Claim 6, ~~characterized by~~ further comprising at least one third connection device[[,]] which connects the first chamber ~~(13, 13')~~ and the turbine chamber ~~(25, 25')~~ for passage of the liquid first working medium ~~(21, 21'), particularly~~ in the form of a third opening ~~(19, 20'), preferably~~ implemented in the thermally insulating wall ~~(17, 17')~~.

11. (Currently amended) The thermal combustion engine according to ~~one of Claims 6 through 10~~ Claim 6, ~~characterized by~~ further comprising at least one fourth connection device[[,]] which connects the turbine chamber and the second chamber for passage of the liquid first working medium~~, preferably~~ in the form of at least one fourth opening~~, which is particularly~~ implemented in the thermally insulating wall.

12. (Currently amended) The thermal combustion engine according to Claim 10 or 11, ~~characterized in that~~ wherein the liquid first working medium ~~(21, 21', 73, 73')~~ prevents the vaporized first working medium ~~(21, 21', 73, 73')~~ from exiting the first chamber ~~(13, 13', 63, 63',~~

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~~129, 129', 129")~~ through the third and/or fourth connection device during a rotation of the rotor ~~(11, 11', 11", 61, 61', 61", 117, 117', 117"), particularly~~ and blocks the third and/or fourth opening ~~(19, 20'), particularly because of~~ due to the centrifugal force acting on the working medium ~~(21, 21', 73, 73', 137)~~.

13. (Currently amended) The thermal combustion engine according to ~~one of~~ Claims 10 ~~through 12~~ or 11, ~~characterized by~~ further comprising at least one third flow control ~~and/or regulation device~~, which is operationally linked to the third connection device, and/or at least one fourth flow control ~~and/or regulation device,~~ which is operationally linked to the fourth connection device~~, preferably~~ in the form of a third and/or fourth valve~~, particularly a check valve~~.

14. (Currently amended) The thermal combustion engine according to ~~one of Claims 6 through 13~~ Claim 6, ~~characterized in that~~ wherein the second chamber ~~(15, 15')~~ and the turbine chamber ~~(25, 25')~~ are molded in one piece.

15. (Currently amended) The thermal combustion engine according to ~~one of Claims 6 through 14~~ Claim 6, ~~characterized by~~ further comprising at least one flow guiding body ~~(14', 16')~~ implemented in the first chamber ~~(13')~~, the second chamber ~~(15')~~, and/or the turbine chamber ~~(25')~~.

16. (Currently amended) The thermal combustion engine according to ~~one of the preceding claims~~ Claim 2, ~~characterized by~~ further comprising at least one first blade wheel ~~(7, 7', 7", 57a, 57a', 57a", 109),~~ surrounded by the stator ~~(3, 3', 3", 53, 52', 53", 103, 103', 103"),~~ to which the vaporized first working medium ~~(21, 21', 73, 73', 137)~~ may be supplied, ~~preferably~~ via [[the]] a first connection device ~~(27, 27', 27", 75, 75', 75", 77, 77', 77", 139),~~ for rotating the rotor ~~(11, 11', 11", 61, 61', 61", 117, 117', 117") relative to the stator (3, 3', 3", 53, 53', 53", 103, 103',~~

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~~103"), particularly~~ axially, radially, and/or at a predefined angle in relation to the ~~first~~ axis of rotation.

17. (Currently amended) The thermal combustion engine according to Claim 16, ~~characterized by~~ further comprising at least one flow guiding wheel ~~(8", 125),~~ which is operationally linked to the rotor ~~(11", 117, 117', 117"), particularly~~ and connectable thereto for secure rotational driving, and is positioned upstream and/or downstream of the vaporized working medium ~~(21', 137)~~ in relation to the first blade wheel ~~(7", 109)~~, the flow guiding wheel ~~(8", 125)~~ being positioned at least partially concentrically to the first blade wheel ~~(7", 109),~~ ~~particularly~~ inside and/or outside the first blade wheel ~~(7", 109)~~.

18. (Currently amended) The thermal combustion engine according to Claim ~~16 or~~ 17, ~~characterized by~~ further comprising:

at least one second blade wheel ~~(57b, 57b', 57c', 57b", 57c", 111), which is~~ surrounded by the stator ~~(53, 53', 53", 103, 103', 103")~~ and ~~is particularly~~ positioned downstream of the vaporized working medium in relation to the flow guiding wheel[[,]]; and

at least one deflection wheel ~~(79a, 79b, 79a', 79b', 79c', 79a", 79b", 79c"), which is~~ operationally linked to the rotor ~~(61, 61', 61"), particularly~~ and connectable thereto for secure rotational driving, ~~preferably~~ being positioned upstream and/or downstream of the vaporized working medium ~~(73, 73')~~ in relation to the second blade wheel ~~(57b, 57b', 57b", 57c', 57c")~~, the deflection wheel ~~particularly~~ being positioned at least partially concentrically to the first and/or second blade wheel~~, particularly~~ either inside and/or outside the first and/or second blade wheel.

19. (Currently amended) The thermal combustion engine according to ~~one of Claims 16 to~~ Claim 18, ~~characterized in that~~ wherein the first blade wheel ~~(7, 7', 57a, 57a', 57a")~~, the flow guiding wheel, the second blade wheel ~~(57b, 57b', 57c', 57b", 57c"),~~ and/or the deflection

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wheel ~~(79a, 79b, 79a', 79b', 79c', 79a", 79b", 79c")~~ are at least partially positioned in the turbine chamber ~~(25, 25')~~.

20. (Currently amended) The thermal combustion engine according to Claim 18 or 19, ~~characterized in that~~ wherein the second blade wheel has a second diameter deviating from a first diameter of the first blade wheel and/or a number and/or geometry of the blades deviating from the number and/or geometry of the blades of the first blade wheel.

21. (Currently amended) The thermal combustion engine according to ~~one of Claims 18 to 20~~ Claim 18, ~~characterized by~~ further comprising multiple second blade wheels ~~(57b', 57c', 57b", 57c")~~ and/or deflection wheels ~~(79a, 79b, 79a', 79b', 79c', 79a", 79b", 79c")~~, the second blade wheels ~~(57b', 57c') preferably~~ having different diameters, different geometries, and/or a different number of blades from one another and/or the deflection wheels ~~(79a', 79b', 79c')~~ having different diameters, different geometries, and/or a different number of blades from one another.

22. (Currently amended) The thermal combustion engine according to ~~one of Claims 16 to 21~~ Claim 18, ~~characterized in that~~ wherein the geometry and/or the position of at least one blade of the first blade wheel, of at least one second blade wheel, of the flow guiding wheel, and/or of at least one deflection wheel is/are adjustable, preferably during operation of the thermal combustion engine.

23. (Currently amended) The thermal combustion engine according to ~~one of the preceding claims~~ Claim 2, ~~characterized by~~ further comprising:

at least one heating ~~means~~ apparatus for applying heat to the vapor generation device ~~(11a, 11a', 11a", 13, 13', 61a, 61a', 63, 63', 115, 115', 115", 129, 129', 129"), particularly the first chamber (13, 13', 63, 63', 129, 129', 129"), preferably~~ in the form of a fluid heating medium~~, particularly in the form of hot gases, such as combustion gases (29, 29', 71, 71', 135),~~;

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a heat source~~, for example,~~ in the form of at least one heating spindle[[,]] which is integrated in a wall of the ~~first chamber,~~ vapor generation device and which ~~particularly~~ comprises a material of high thermal conductivity and/or is structured for high conductive thermal transport, and/or is implemented on the surface of [[this]] the wall[[,]];

at least one first flow device for a heating fluid ~~(29, 29', 71, 71', 135),~~;

at least one first structure~~, which is~~ implemented on an outside of the wall ~~(11a, 11a', 11a", 61a, 61a', 115, 115', 115")~~ of the ~~first chamber~~ vapor generation device ~~(13, 13', 63, 63', 129, 129', 129") and may particularly have~~ having the heating fluid ~~(29, 29', 71, 71', 135)~~ flow through it[[,]]; and[[/or]]

at least one second structure~~, which is~~ implemented on an inside of the wall ~~(11a, 11a', 11a", 61a, 61a', 115, 115', 115")~~ of the ~~first chamber~~ vapor generation device ~~(13, 13', 63, 63', 129, 129', 129") and may particularly have the preferably~~ having the vaporized working medium ~~(21, 21', 73, 73', 137)~~ flow through it.

24. (Currently amended) The thermal combustion engine according to Claim 23, ~~characterized in that~~ wherein the first flow device is integrated in the wall, the heating ~~means preferably~~ fluid being supplied to the first flow device via a shaft of the stator and/or the heating ~~means particularly~~ fluid being circulated in a ~~preferably~~ closed heating loop which comprises the first flow device.

25. (Currently amended) The thermal combustion engine according to ~~one of the preceding claims~~ Claim 2, ~~characterized by~~ further comprising:

at least one ~~coolant~~ cooling apparatus to apply cold to the condensation device ~~(11c, 11c', 11c", 15, 15', 61c, 61c', 65, 65', 65", 107, 107', 107", 131, 131', 131"), particularly the second chamber (15, 15', 65, 65', 65", 131, 131', 131"), preferably~~ in the form of a fluid cooling medium~~, particularly in the form of nitrogen or cold air (31, 31', 81, 81', 141),~~;

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a cooling source~~, for example,~~ in the form of at least one Peltier element[[,]] which is ~~particularly~~ implemented in a wall of the ~~second chamber~~ condensing device, which ~~preferably~~ comprises a material of high thermal conductivity and/or is structured for high convective heat transport, and/or is implemented on the surface of [[this]] the wall[[,]];

at least one second flow device for a cooling fluid ~~(31, 31', 81, 81', 141), such as nitrogen or cold air,~~;

at least one third structure~~, which is~~ implemented on an outside of the wall ~~(11c, 11c', 11c", 61c, 61c', 107, 107', 107")~~ of the ~~second chamber~~ condensing device ~~(15, 15', 65, 65', 65", 131, 131', 131")~~ and ~~may particularly have~~ having the cooling fluid ~~(31, 31', 81, 81', 141)~~ flow through it[[,]]; and[[/or]]

at least one fourth structure~~, which is~~ implemented on an inside of the wall ~~(11c, 11c', 11c", 61c, 61c', 107, 107', 107")~~ of the ~~second chamber~~ condensing device ~~(15, 15', 65, 65', 65", 131, 131', 131") and may particularly have~~ having the working medium ~~(21, 21', 137)~~ flow through it.

26. (Currently amended) The thermal combustion engine according to Claim 25, ~~characterized in that~~ wherein the second flow device is integrated in the wall, the ~~coolant preferably~~ cooling fluid being supplied to the second flow device via a shaft of the stator and/or the ~~coolant particularly~~ cooling fluid being circulated in a ~~preferably~~ closed cooling loop which comprises the second flow device.

27. (Currently amended) The thermal combustion engine according to ~~one of Claims 23 through 26~~ Claim 23, ~~characterized in that~~ wherein the heating fluid ~~(29, 29', 71, 71')~~ has a flow direction in the area of the heating ~~means~~ apparatus which runs ~~essentially~~ generally radially outward from the ~~first~~ axis of rotation to the external circumference of the rotor ~~(11, 11', 11", 61, 61', 61")~~, and/or the cooling fluid ~~(31, 31', 81, 81')~~ has a flow direction in the area of the

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~~coolant~~ cooling apparatus which runs ~~essentially~~ generally radially from the outer circumference of the rotor ~~(11, 11', 11", 61, 61')~~ in the direction of the ~~first~~ axis of rotation.

28. (Currently amended) The thermal combustion engine according to ~~one of the preceding claims~~ Claim 2, ~~characterized by~~ further comprising at least one supply device for supplying at least one vaporized second working medium, the first and second vaporized working media ~~preferably~~ being identical.

29. (Currently amended) The thermal combustion engine according to ~~one of the preceding claims~~ Claim 2, ~~characterized by~~ further comprising at least one removal device for removing at least a part of the vaporized and/or liquid first working medium.

30. (Currently amended) The thermal combustion engine according to Claim 28 or 29, ~~characterized by~~ further comprising at least one fifth flow control ~~and/or regulation device,~~ which is operationally linked to the supply device, and/or at least one sixth flow control ~~and/or regulation device,~~ which is operationally linked to the removal device.

31. (Currently amended) The thermal combustion engine according to ~~one of the preceding claims~~ Claim 30, ~~characterized by~~ further comprising at least one control ~~and/or regulation unit,~~ which is operationally linked to the vapor generation device, the condensation device, [[the]] a first and/or second nozzle of the first, second, third, fourth, fifth, and/or sixth flow control ~~and/or regulation device~~, the first blade wheel, at least one second blade wheel, the flow guiding wheel and/or at least one deflection wheel, the heating ~~means~~ apparatus, the cooling ~~means~~ apparatus, and/or a sensor for measuring the rotational velocity of the rotor.

32. (Currently amended) A use of a thermal combustion engine according to ~~one of the preceding claims~~ Claim 1 as a topping turbine, exhaust vapor turbine, back pressure turbine, extraction turbine, impulse turbine, and/or reaction turbine.

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